

WHAT IS CLAIMED IS:

1. A computer system comprising:
- a first heat generating element in which a heat generation amount is changed;
- 5 a second heat generating element;
- a fan configured to cool the first and second heat generating elements;
- a first temperature sensor configured to detect a temperature of the first heat generating element;
- 10 a second temperature sensor configured to detect a temperature of the second heat generating element; and
- a controller configured to control a rotation speed of the cooling fan, based on the temperatures detected by the first and second temperature sensors.
- 15 2. The computer system according to claim 1, wherein the controller includes a first control flag which is switched on/off in accordance with a change of the temperature detected by the first sensor, and a second control flag which is switched on/off in
- 20 accordance with a change of the temperature detected by the second sensor, and the rotation speed of the cooling fan is determined in correspondence with a combination of states of the first and second control flags.
- 25 3. The computer system according to claim 2, wherein the first control flag is switched on when the temperature detected by the first sensor exceeds a

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first predetermined value, and the first control flag is switched off when the temperature detected by the first sensor goes under a second predetermined value, and

5 the second control flag is switched on when the temperature detected by the second sensor exceeds a third predetermined value, and the second control flag is switched off when the temperature detected by the second sensor goes under a fourth predetermined value.

10 4. The computer system according to claim 1, wherein the first heat generating element comprises a CPU and the second heat generating element comprises a power source circuit.

15 5. The computer system according to claim 4, wherein the CPU has a power save mode.

20 6. A method of controlling a rotation speed of a cooling fan in a computer system including a first heat generating element in which a heat generation amount is changed and a second heat generating element, the method comprising:

cooling the first and second heat generating elements by a fan;

detecting a temperature of the first heat generating element by a first temperature sensor;

25 detecting a temperature of the second heat generating element by a second temperature sensor; and controlling the rotation speed of the cooling fan,

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based on the temperatures respectively detected by the first and second temperature sensors.

5 7. The method according to claim 6, wherein in the controlling the rotation speed of the cooling fan, a first control flag is switched on/off in accordance with a change of the temperature detected by the first sensor, a second control flag is switched on/off in accordance with a change of the temperature detected by the second sensor, and the rotation speed of the
10 cooling fan is determined in correspondence with a combination of states of the first and second control flags.

15 8. The method according to claim 7, wherein the first control flag is switched on when the temperature detected by the first sensor exceeds a first predetermined value, and the first control flag is switched off when the temperature detected by the first sensor goes under a second predetermined value, and

20 the second control flag is switched on when the temperature detected by the second sensor exceeds a third predetermined value, and the second control flag is switched off when the temperature detected by the second sensor goes under a fourth predetermined value.

25 9. The method according to claim 6, wherein the first heat generating element comprises a CPU and the second heat generating element comprises a power source circuit.

10. The method according to claim 9, wherein the CPU has a power save mode.

11. A computer system comprising:

5 a CPU capable of operating at a first frequency
and a second frequency higher than the first frequency
and brought into different heat generation states,
respectively, in correspondence with the frequencies;

a heat generating element different from the CPU;

10 a fan configured to cool the CPU and the heat
generating element;

a first temperature sensor configured to detect a
temperature at which the CPU should be cooled;

15 a second temperature sensor configured to detect a
temperature at which the heat generating element should
be cooled; and

a controller configured to control the fan to cool
the heat generating element, if the second temperature
sensor detects the temperature at which the heat
generating element should be cooled, in a state where
20 the CPU operates at the first frequency and the first
temperature sensor does not detect the temperature at
which the CPU should be cooled.

12. A computer system comprising:

25 a CPU capable of operating at a first frequency
and a second frequency higher than the first frequency;

a heat generating element different from the CPU;

a fan configured to cool the CPU and the heat

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generating element;

a temperature sensor configured to detect a temperature at which the heat generating element should be cooled; and

5 a controller configured to control the fan to cool the CPU and the heat generating element, if the temperature sensor detects the temperature at which the heat generating element should be cooled, while the CPU operates at the first frequency.

10 13. A computer system comprising:

a first heat generating element;

a second heat generating element;

15 a fan configured to cool the first and second heat generating elements, by introducing cooling gas to the first heat generating element and further introducing the cooling gas to the second heat generating element through the first heat generating element; and

20 a controller configured to control the fan to rotate at a higher speed in a case of cooling the second heat generating element than in a case of cooling the first heat generating element.

14. A computer system comprising:

25 a CPU capable of operating in at least two kinds of states having respectively different heat generation levels;

a heat generating element different from the CPU;

a fan configured to cool the CPU and the heat

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generating element, by introducing cooling gas to the CPU and further introducing the cooling gas to the heat generating element through the CPU;

5 a first temperature sensor configured to detect a temperature of the CPU;

a second temperature sensor configured to detect a temperature of the heat generating element; and

10 a controller configured to control the fan to rotate at a first rotation speed if the first temperature sensor detects a temperature at which the CPU should be cooled and if the second temperature sensor does not detect a temperature at which the heat generating element should be cooled, control the fan to rotate at a second rotation speed higher than the first rotation speed if the first temperature sensor does not
15 detect the temperature at which the CPU should be cooled and if the second temperature sensor detects the temperature at which the heat generating element should be cooled, and control the fan to rotate at a third
20 rotation speed higher than the second rotation speed if the first temperature sensor detects the temperature at which the CPU should be cooled and if the second temperature sensor detects the temperature at which the heat generating element should be cooled.

25 15. A method of controlling a rotation speed of a cooling fan in a computer system including a CPU capable of operating at a first frequency and a second

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frequency higher than the first frequency and brought
into different heat generation states in correspondence
with the frequencies, respectively, and a heat
generating element different from the CPU, the method
5 comprising;

cooling the CPU and the heat generating element by
a fan;

detecting a temperature at which the CPU should be
cooled, by a first temperature sensor;

10 detecting a temperature at which the heat
generating element should be cooled, by a second
temperature sensor; and

controlling the fan to cool the heat generating
element, if the second temperature sensor detects the
15 temperature at which the heat generating element should
be cooled, in a state where the CPU operates at the
first frequency and the first temperature sensor does
not detect the temperature at which the CPU should be
cooled.

20 16. A method of controlling a rotation speed of a
cooling fan in a computer system including a CPU
capable of operating at a first frequency and a second
frequency higher than the first frequency, and a heat
generating element different from the CPU, the method
25 comprising:

cooling the CPU and the heat generating element by
a fan;

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detecting a temperature at which the heat
generating element should be cooled, by a temperature
sensor; and

5 controlling the fan to cool the CPU and the heat
generating element, if the temperature sensor detects
the temperature at which the heat generating element
should be cooled, while the CPU operates at the first
frequency.

10 17. A method of controlling a rotation speed of a
cooling fan in a computer system including a first heat
generating element and a second heat generating element,
the method comprising:

15 cooling the first and second heat generating
elements by the fan, by introducing cooling gas to the
first heat generating element and further introducing
the cooling gas to the second heat generating element
through the first heat generating element; and

20 controlling the fan to rotate at a higher speed in
case of cooling the second heat generating element than
in case of cooling the first heat generating element.

25 18. A method of controlling a rotation speed of a
cooling fan in a computer system including a CPU
capable of operating in at least two kinds of states
having respectively different heat generation levels,
and a heat generating element different from the CPU,
the method comprising:

cooling the CPU and the heat generating element by

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a fan, by introducing cooling gas to the CPU and further introducing the cooling gas to the heat generating element through the CPU;

5 detecting a temperature of the CPU by a first temperature sensor;

detecting a temperature of the heat generating element by a second temperature sensor; and

10 controlling the fan to rotate at a first rotation speed if the first temperature sensor detects a temperature at which the CPU should be cooled and if the second temperature sensor does not detect a temperature at which the heat generating element should be cooled, controlling the fan to rotate at a second rotation speed higher than the first rotation speed if
15 the first temperature sensor does not detect the temperature at which the CPU should be cooled and if the second temperature sensor detects the temperature at which the heat generating element should be cooled, and controlling the fan to rotate at a third rotation
20 speed higher than the second rotation speed if the first temperature sensor detects the temperature at which the CPU should be cooled and if the second temperature sensor detects the temperature at which the heat generating element should be cooled.

25 19. A computer system comprising:
a CPU;
a power source circuit;

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a first temperature sensor configured to detect a temperature of the CPU;

a second temperature sensor configured to detect a temperature of the power source circuit; and

5 a drive control circuit configured to drive and control a specific element, based on at least one of the temperatures detected by the first and second temperature sensors.

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